

UNITED STATES DISTRICT COURT
DISTRICT OF NEVADA

ELAN MICROELECTRONICS CORPORATION,)

Plaintiff,)

vs.)

PIXCIR MICROELECTRONICS CO. LTD.,)

Defendant.)

Case No.: 2:10-cv-00014-GMN-PAL

ORDER

Pending before the Court are the proposed claim constructions submitted by Plaintiff Elan Microelectronics Corporation (“Plaintiff”) and Defendant Pixcir Microelectronics Co. Ltd. (“Defendant”). Plaintiff filed its Opening Brief on August 16, 2012 (ECF No. 165), Defendant filed a Responsive Brief on August 31, 2012 (ECF No. 173), and Plaintiff filed a Reply Brief on September 10, 2012 (ECF No. 177). A Tutorial Hearing was held on October 23, 2012, and a *Markman* Claim Construction Hearing was held on November 2, 2012.

This is an Order construing the disputed terms of the claims in United States Patent No. 5,825,352 (“the ’352 Patent”). The parties have submitted eight (8) terms and phrases for construction. (*See* Joint Statement, ECF No. 149.) In addition, the parties agree on the interpretation of two (2) additional terms and four (4) means-plus-function limitations. (*See id.* at 5:2-6.) The Court will adopt the proposed claim construction for the two terms on which the parties agree, as reflected herein. Additionally, the Court will adopt the proposed constructions for the four (4) means-plus-function limitations on which the parties agree as to the recited function and the corresponding structure, as reflected herein.

After consideration of the briefs and material submitted by the parties, the arguments of counsel at the claim construction hearing, and the record before the Court, the Court issues this

1 Order construing the disputed claim terms.

2 **I. BACKGROUND**

3 Plaintiff Elan Microelectronics Corporation (“Plaintiff”) is the sole owner of the ’352
4 Patent entitled “Multiple Finger Contact Sensing Method for Emulating Mouse Buttons and
5 Mouse Operations on a Touch Sensor Pad.” (Am. Compl. ¶ 5, ECF No. 8.) Plaintiff is a
6 Taiwanese corporation (*id.* at ¶ 4) that conducts research and development activities for
7 “products that enable Smart Human-Machine Interface solutions” (*id.* at ¶ 7). Specifically,
8 Plaintiff is known for developing “capacitive touchpads and transparent touchscreens” that are
9 capable of recognizing “touchpad gestures involving multiple simultaneous finger touches for
10 input devices.” (*Id.* at ¶ 7.) Plaintiff’s Capacitive Touchpad Multi-Finger Solution is one
11 embodiment of the ’352 Patent. (*Id.* at ¶ 8.)

12 Defendant Pixcir Microelectronics Co. Ltd. (“Defendant”) designs, markets, and sells
13 integrated circuit products. (*Id.* at ¶ 9.) Plaintiff alleges that Defendant has infringed the ’352
14 Patent by using, selling, offering for sale, and marketing touchpad and touchscreen products that
15 have the ability to recognize multi-finger gestures. (*Id.* at ¶ 11.) Therefore, Plaintiff filed the
16 instant action on January 7, 2010, alleging infringement of the ’352 Patent. (*See* Compl., ECF
17 No. 1.)

18 **II. LEGAL STANDARD**

19 The resolution of patent infringement actions generally requires two distinct steps. First,
20 the Court engages in a claim construction analysis to “determin[e] the meaning and scope of the
21 patent claims asserted to be infringed.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967,
22 976 (Fed. Cir. 1995) (en banc), aff’d 517 U.S. 370 (1996). Only once the claims are properly
23 construed does the action proceed to the second step, in which the fact finder compares those
24 properly construed claims to the accused device to determine, as a matter of fact, whether all of
25 the claim limitations are present in the accused device. *Id.* At the current stage of this patent

1 infringement action, the Court focuses only on the first step.

2 **A. Claim Construction**

3 “It is a bedrock principle of patent law that the claims of a patent define the invention to
4 which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312
5 (Fed.Cir.2005) (en banc) (citations and internal quotation marks omitted). The interpretation of
6 the scope and meaning of disputed terms in patent claims is a question of law and exclusively
7 within the province of a court to decide. *Markman*, 517 U.S. at 372. When construing disputed
8 claim terms, the Court must give each disputed term “the meaning that the term would have to a
9 person of ordinary skill in the art at the time of the invention,” unless the patentee clearly
10 intended a different definition. *Phillips*, 415 F.3d at 1312-13. Furthermore, “the person of
11 ordinary skill in the art is deemed to read the claim term not only in the context of the particular
12 claim in which the disputed term appears but in the context of the entire patent, including the
13 specification.” *Id.* at 1313.

14 In certain cases, “the ordinary meaning of claim language as understood by a person of
15 skill in the art may be readily apparent even to lay judges, and claim construction in such cases
16 involves little more than the application of the widely accepted meaning of commonly
17 understood words.” *Id.* at 1314. In other instances, the claim term may have a particular
18 meaning in the field of art that is not immediately clear. *Id.* In such cases, the Federal Circuit
19 has instructed that a court’s analysis should focus on the intrinsic evidence, including “the words
20 of the claims themselves, the remainder of the specification, the prosecution history, and
21 extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and
22 the state of the art.” *Id.* at 1314. “[T]he claims themselves provide substantial guidance as to the
23 meaning of particular claim terms.” *Id.* “Other claims of the patent in question, both asserted
24 and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim
25 term.” *Id.* Specifically, differences between the claims often provide useful guidance in

1 understanding the meaning of the claim terms. *Id.* “For example, the presence of a dependent
2 claim that adds a particular limitation gives rise to a presumption that the limitation in question
3 is not present in the independent claim.” *Id.* at 1314–15.

4 The claims, however, are not read in isolation, but are read in light of the entire
5 specification, of which the claims are a part. *Id.* In fact, the specification is “the single best
6 guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576,
7 1582 (Fed. Cir. 1996). Courts can also look to the prosecution history as part of “intrinsic
8 evidence” to determine how the Patent Office and the inventor understood the patent. *Phillips*,
9 415 F.3d at 1317. However, the prosecution history lacks the clarity of the specification and
10 more often is less useful for claim construction purposes. *Id.*

11 Finally, extrinsic evidence may also be relevant to claim construction. *Id.* Extrinsic
12 evidence “consists of all evidence external to the patent and prosecution history, including
13 expert and inventor testimony, dictionaries, and learned treatises.” *Markman*, 52 F.3d at 980.
14 Although such evidence may aid the Court in construing claim terms, “it is unlikely to result in a
15 reliable interpretation of patent claim scope unless considered in the context of the intrinsic
16 evidence.” *Phillips*, 415 F.3d at 1319. Thus, “while extrinsic evidence can shed useful light on
17 the relevant art, . . . it is less significant than the intrinsic record in determining the legally
18 operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations and internal
19 quotation marks omitted).

20 **III. THE LEVEL OF ORDINARY SKILL**

21 Patent claims are to be construed to reflect the understanding of an ordinary worker in the
22 appropriate field. *Phillips*, 415 F.3d at 1312-13 (“[T]he ordinary and customary meaning of a
23 claim term is the meaning that the term would have to a person of ordinary skill in the art in
24 question at the time of the invention . . .”). Thus, in the claim construction process, the Court
25 must first determine the level of ordinary skill in the relevant technology. In making this

determination, the Court considers the complexity of the technology, the pace of technological advancement in the field, and the education and experience of those working in the area. *See Daiichi Sankyo Co., Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1257 (Fed. Cir. 2007).

In this case, both parties agree¹ that the appropriate level of skill is “an undergraduate degree in electrical engineering or computer science with class work in electrical circuits, and about three years of experience in the design and operation of touch-sensitive input devices.” (See Pl.’s Br. 7:12-14, ECF No. 165.) “One with a more advanced degree may have less practical experience.” (*Id.* at 7:14-15 (citing MacKenzie Decl. ¶ 3, ECF No. 166).)

IV. CONSTRUCTION OF THOSE TERMS ON WHICH THE PARTIES AGREE

In their Joint Claim Construction and Prehearing Statement, the parties submitted proposed constructions for two (2) terms on which they agree. (Joint Statement 5:2-6, ECF No. 149.) The Court hereby adopts those proposed constructions. Therefore, the Court construes the term “scanning the touch sensor” as “measuring the values generated by a touch sensor to detect operative coupling and determining the corresponding positions at which measurements are made.” In addition, the Court construes the term “control function” as “a function executed in response to the detection of finger(s).”

V. CONSTRUCTION OF THE DISPUTED CLAIM TERMS

The parties dispute the construction of eight (8) terms: (1) signal; (2) maxima; (3) minima; (4) to . . . identify a first maxima in a signal corresponding to a first finger; (5) to . . . identify a minima following the first maxima; (6) to . . . identify a second maxima in a signal corresponding to a second finger following said minima; (7) in response to; and (8) operative coupling. Each of these terms is present in both independent claim 1 and independent claim 18. The disputed claim terms are highlighted below.

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¹ The parties stated this agreement on the record at the Claims Construction Hearing on November 2, 2012.

1 Claim 1:

2 A method for detecting the **operative coupling** of multiple fingers to a touch
 3 sensor involving the steps of:
 4 scanning the touch sensor to (a) identify a first **maxima** in a **signal** corresponding
to a first finger, (b) identify a **minima** following the first **maxima**, (c) identify a
 5 second **maxima** in a **signal** corresponding to a second finger following said
minima, and
 6 providing an indication of the simultaneous presence of two fingers **in response to**
 identification of said first and second **maxima**.

7 Claim 18:

8 A touch sensor for detecting the **operative coupling** of multiple fingers
 9 comprising:
 10 Means for scanning the touch sensor to (a) identify a first **maxima** in a **signal**
corresponding to a first finger, (b) identify a **minima** following the first
 11 **maxima**, and (c) identify a second **maxima** in a **signal** corresponding to a
second finger following said **minima**, and
 12 Means for providing an indication of the simultaneous presence of two fingers **in**
response to identification of said first and second **maxima**.

13 A. “Signal”

14 **Proposed Constructions²**

15 Elan	“electronic digital values”
16 Pixcir	“one-dimensional profile representing the degree of operative coupling at various positions, as conveyed from the touch sensor”

17 Plaintiff Elan argues that Defendant Pixcir’s proposed construction is an “egregious
 18 example” of “a wholesale re-writing of the claim language.” (Pl.’s Opening Claim Construction
 19 Br. 10:16-20, ECF No. 165.) Plaintiff further argues that its proposed construction, in contrast
 20 to Defendant’s proposed construction, is supported by the words of the written description. (*Id.*
 21 at 9:21-10:11.) To support its proposed construction, Plaintiff relies on the “fundamental rule of
 22 claim construction” that “claims must be construed so as to be consistent with the specification,
 23 of which they are a part.” (*Id.* at 10:12-24 (citing *Phillips*, 415 F.3d at 1316 (quoting *Merck &*
 24

25 ² The parties’ proposed constructions are taken from their Joint Claim Construction and Prehearing Statement.
 (See ECF No. 149-1.)

1 *Co. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003))).) Defendant, on the
 2 other hand, argues that Plaintiff’s proposed construction “is a nebulous definition with no real
 3 meaning and no real relevance to the language of the claims.” (Def.’s Resp. Br. 16, ECF No.
 4 173.) As discussed below, Defendant’s construction is problematic for two primary reasons.
 5 First, much of Defendant’s support for its proposed construction comes from previous claim
 6 construction orders issued by other district courts in prior litigation involving the ’352 Patent.
 7 (*Id.* at 17-18.) This reliance is unpersuasive for two reasons: (a) the orders are non-binding
 8 interlocutory orders; and (b) these prior orders did not actually construe the term “signal.”
 9 Second, and most fatal to Defendant’s proposed construction, Defendant fails to adequately
 10 ground its construction in the words of the patent. Ultimately, the Court cannot find support in
 11 the words of the patent for Defendant’s proposed constructions. For these reasons, and for the
 12 reasons discussed below, the Court must reject Defendant’s proposed construction and will
 13 adopt Plaintiff’s proposed construction. Therefore, the Court construes the term “signal” as
 14 “electronic digital values.”

15 ***1. Defendant’s Proposed Construction.***

16 Defendant requests that this Court construe the term “signal” as a “one-dimensional
 17 profile representing the degree of operative coupling at various positions, as conveyed from the
 18 touch sensor.” (Joint Statement Ex. A, at 4, ECF No. 149-1.) Defendant offers its support for
 19 this construction in three sections: (1) “one-dimensional profile”; (2) “representing the degree
 20 of operative coupling at various positions”; and (3) “as conveyed from the touch sensor.” The
 21 Court addresses each of these clauses in turn below. Ultimately, Defendant has failed to
 22 adequately support its construction with evidence from the intrinsic record. Thus, the Court
 23 rejects Defendant’s proposed construction.

24 ***a. “One-dimensional profile”***

25 Defendant’s proposed construction would first require that, in the context of the ’352

1 Patent, the term “signal” must correspond to a “one-dimensional profile.” (Resp. Br. 17.)
2 Defendant argues that this proposed construction is supported by the specification of the ’352
3 Patent, specifically, unasserted dependent Claim 6. (*Id.* at 16.) Claim 6 claims “[t]he method of
4 claim 1 wherein said touch sensor includes a plurality of lines, said maxima being a largest local
5 variation in a signal value on one of said lines due to capacitive coupling of a finger.” U.S.
6 Patent No. 5,825,352 col.16 ll.36-39 (filed Feb. 28, 1996). From this language, Defendant
7 asserts that the term “‘signal’ must be capable of containing a ‘local variation’—which implies a
8 positional characteristic.” (Def.’s Resp. Br. 16.) Defendant further contends that this “positional
9 characteristic” necessarily requires that one of ordinary skill in the art would read the term
10 “signal” to be a one-dimensional profile. (*Id.* at 17.)

11 In addition to relying on Claim 6, Defendant also relies on two previous orders from the
12 United States District Court for the Northern District of California that construe several claim
13 terms in the ’352 Patent.³ (Def.’s Resp. Br. 17 (citing *Elan Microelectronics Corp. v. Apple,*
14 *Inc.*, No. 09-cv-01531-RS, 2010 WL 4510909 (N.D. Cal. Nov. 1, 2010) [hereinafter, the “*Apple*
15 *litigation*”]; *Elantech Devices Corp. v. Synaptics, Inc.*, No. 06-cv-01839-CRB, 2007 WL
16 1056782 (N.D. Ca. Apr. 6, 2007) [hereinafter, the “*Synaptics litigation*”])). Specifically,
17 Defendant argues that these prior constructions similarly required a signal to correspond to a
18 one-dimensional profile. Defendant contends that Plaintiff itself previously requested these
19 “relational requirements” in those cases and argues that Plaintiff should not now be permitted
20 “to run from these relational requirements.” (Def.’s Resp. Br. 17-18.)

21 The Court finds these arguments unpersuasive. First, Defendant’s conclusory and
22 convoluted argument related to Claim 6 fails to persuade the Court that a person of ordinary skill
23 in the art of electrical engineering or computer science would read “signal” as always
24

25 ³ Both parties agree that these prior orders are only persuasive authority and, thus, have no binding or preclusive effect on this Court.

1 corresponding to a “one-dimensional profile.” Additionally, with the exception of its reference
2 to dependent Claim 6, Defendant fails to support its proposed construction with the words of the
3 specification. Although the Court recognizes that the claims of the ’352 Patent do require some
4 location or relational aspect between the minima and the maxima, this requirement arises from
5 other terms within the language of the claims.

6 Second, Defendant’s proposed construction is also problematic because it would define
7 “signal” in a manner that is inconsistent with how the term “signal” is used elsewhere in the
8 specification. Specifically, the written description of the ’352 Patent explains that when a finger
9 is located on the touch sensor, the resulting change in capacitance is detected as an analog value.
10 ’352 Patent col.5 ll.32-35. Next, an “analog to digital converter” converts the analog value(s) to
11 “digital representation(s)” of the analog capacitance value. ’352 Patent col.5 ll.44-48. Only after
12 the analog value is converted to a digital value does the digital converter “suppl[y] the signals to
13 the microcontroller.” ’352 Patent col.5 ll.48-49. Given this explanation of how the signal is
14 generated, the Court finds no indication that the signal must be one-dimensional. Furthermore,
15 this section of the written description establishes that the method uses the resulting signals to
16 “form, among other things, a finger profile for one or more fingers.” ’352 Patent col.5 ll.49-51.
17 Accordingly, the Court finds no support in the specification that the term “signal” should be
18 limited to a “one-dimensional *profile*.”

19 Finally, Defendant’s references to prior claim construction orders concerning the ’352
20 Patent are unconvincing. Specifically, Defendant’s reliance on these prior claim construction
21 orders fails because the term “signal” was not construed in either the *Apple* litigation or the
22 *Synaptics* litigation. Therefore, these prior orders are unhelpful in construing the present term.

23 For the reasons discussed above, the Court finds that a person of ordinary skill in the art
24 of electrical engineering or computer science would not understand the term “signal” as
25 necessarily corresponding to a one-dimensional profile. Accordingly, the Court cannot limit the

1 definition of the term “signal” to a “one-dimensional profile,” as Defendant urges. This portion
2 of Defendant’s proposed construction lacks support in the words of the ’352 Patent.

3 ***b. “representing the degree of operative coupling at various positions”***

4 Defendant also contends that the term “signal” should not be construed as “free-floating
5 ‘electronic digital values.’” (Def.’s Resp. Br. 18.) Instead, Defendant argues that the term
6 “‘signal’ must have some relation or correspondence with the operative coupling at the sensor.”
7 (*Id.*) However, Defendant’s only support for this assertion is its belief that such a requirement
8 could be inferred from the language of Claims 1 and 18. Specifically, Defendant’s only
9 statement in support of this position is a statement in its brief that “[c]laims 1 and 18 use the
10 word [sic] “operative coupling,” and although they do not *explicitly* say that the signal has a
11 relationship to the degree of operative coupling, this is a necessary and fair interpretation of the
12 claims.” (Def.’s Resp. Br. 18.) Such a conclusory statement fails to provide adequate support
13 for this portion of Defendant’s proposed construction. As such, the Court cannot adopt this
14 clause of Defendant’s proposed construction without further explanation or additional references
15 to evidence in the intrinsic, or even extrinsic, record.

16 Therefore, the Court finds that a person of ordinary skill in the art of electrical
17 engineering or computer science would not understand the term “signal,” as used in the ’352
18 Patent, as being limited to a representation of the degree of operative coupling at various
19 positions. Accordingly, the Court does not adopt this language as part of the construction of the
20 term “signal.”

21 ***c. “as conveyed from the touch sensor”***

22 Lastly, Defendant requests that the Court include within the construction of “signal” a
23 connection between that signal and the touch sensor. Defendant specifically proposes that the
24 Court include a requirement that the signal is “conveyed from the touch sensor.” This proposed
25 construction misapplies the words of the patent. In reality, the written description explains that

1 measurements are taken from the touch sensor and converted from analog form to digital form.
2 *See* '352 Patent col.5 ll.32-48. Only then are the signals conveyed to the microcontroller. *See*
3 '352 Patent col.5 ll.48-51. The words in the patent specification do not support a construction of
4 the term "signal" that would require that the touch sensor directly conveys the signal.

5 Furthermore, even to the extent that the written description could be read to disclose a
6 system whereby the touch sensor conveys the signal, the rules of claim construction still prevent
7 the Court from adopting this portion of Defendant's proposed construction. Specifically, to
8 include such a limitation in the term of "signal" would result in impermissibly reading a
9 limitation into the claim from the written description. Therefore, the Court finds that a person of
10 ordinary skill in the art of electrical engineering or computer science would not understand the
11 term "signal," as used in the '352 Patent, to require that the signal is directly conveyed from the
12 touch sensor. Accordingly, the Court does not adopt this clause as part of the construction of the
13 term "signal."

14 **2. Plaintiff's Proposed Construction**

15 Plaintiff requests that this Court construe the term "signal" as "electronic digital values."
16 (Joint Statement Ex. A, at 4, ECF No. 149-1.) Plaintiff supports its proposed construction with
17 the words of the patent specification. Specifically, the term "signal" is only used in the written
18 description to refer to the capacitance measurements that are sent to the microcontroller after
19 they are converted from analog form to digital form. '352 Patent col.5 ll.44-49. Thus, the
20 written description clearly indicates that the term signal refers only to the "digital values" that
21 result once the converter has converted the analog values to digital form.

22 Additionally, neither party appears to dispute that the signal must be electronic. Even if
23 there was a dispute, a person of ordinary skill in the art of electrical engineering or computer
24 science would understand that the term "signal," as used in the '352 Patent, referred to the
25 communication of *electronic* information. As discussed above, the written description explains

that the signals are ultimately a product of the capacitance measurements taken from the touch sensor. *See* '352 Patent col.5 ll.32-35, 44-49. Because capacitance is an electrical concept, a person of ordinary skill in the art of electrical engineering or computer science would read the term “signal,” as used in the '352 Patent, to refer to “electronic digital values.”

3. The Court’s Construction

After looking first to the words of the claim and then the remaining parts of the specification, the Court finds that a person of ordinary skill in the art of electrical engineering or computer science would understand the term “signal,” as used in the '352 Patent to mean “electronic digital values.” Therefore, the Court construes the term “signal” as “electronic digital values.”

B. “Maxima”

Proposed Constructions

Elan	“highest value; peak value”
Pixcir	“location at which a signal attains its highest value after increasing and before decreasing”

Plaintiff argues that Defendant’s proposed construction impermissibly alters the definition of the term “maxima” from its accepted meaning without providing an “express statement in the patent” that establishes that patent uses the term in a way that departs from its accepted meaning. (Pl.’s Br. 12:4-8, ECF No. 165.) Defendant, on the other hand, argues that Plaintiff’s proposed construction is contradicted by the words of the claims and the written description of the '352 Patent. (Def.’s Resp. Br. 19, ECF No. 173.)

1. Defendant’s Proposed Construction

Defendant requests that the Court construe the term “maxima” as the “location at which a signal attains its highest value after increasing and before decreasing.” (*Id.*) Plaintiff attacks Defendant’s proposed construction by asserting that Defendant’s definition would depart from the accepted meaning of this term. (Pl.’s Br. 11:1-5, ECF No. 165.) Plaintiff contends that this

1 term cannot be construed in a manner other than its accepted meaning unless the patent
2 “provide[s] an express statement that it is using the word in any way other than its accepted
3 meaning.” (*Id.* at 11:5-6.) In addition, Plaintiff notes that Defendant’s proposed construction
4 would exclude a preferred embodiment of the ’352 Patent. (Pl.’s Reply Br. 8:20-9:19, ECF No.
5 177.) Finally, Plaintiff notes that the Northern District of California rejected a similar
6 construction in the *Synaptics* litigation. (*Id.* at 9:16-19.)

7 ***a. Construing a term contrary to its accepted meaning in the art***

8 The Federal Circuit has previously stated that in order to construe a term contrary to its
9 accepted meaning in the art, the Court must find that the specification has “exhibit[ed] an
10 express intent to impart a novel meaning to claim terms.” *Bell Atl. Network Servs., Inc. v. Covad*
11 *Commc’ns Grp., Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001) (citation and internal quotation
12 marks omitted). Such “express intent” can be found “without an explicit statement of
13 redefinition.” *Id.* Nevertheless, courts should look to the specification for “guidance as to the
14 meaning of the claims, thereby dictating the manner in which the claims are to be construed,
15 even if the guidance is not provided in explicit definitional format.” *Id.* (citation and internal
16 quotation marks omitted).

17 Defendant argues that Plaintiff’s proposed construction is problematic because it would
18 result in defining “maxima” as an “absolute maximum.” (Def.’s Resp. Br. 19.) Defendant
19 asserts that its proposed construction fixes this problem by effectively defining “maxima” as a
20 local maximum, rather than an absolute maximum. (*Id.*) Specifically, Defendant notes that
21 Claims 1 and 18 each require the identification of two maxima; both of such maxima cannot be
22 the “highest value.” (*Id.*) See ’352 Patent col.16 ll.16-20 (Claim 1), col.17 ll.29-33 (Claim 18)
23 (requiring the identification of “a first maxima” and “a second maxima”). Defendant further
24 argues that because of this claim language, “one of the two maxima is not, actually, the highest
25 or peak value within the profile.” (Def.’s Resp. Br. 19.)

1 Although in certain situations, the language of a patent claim may lead a court to construe
2 that term contrary to the term's accepted meaning, the language of the claims in this patent do
3 not lead this Court to construe "maxima" contrary to its accepted meaning. In contrast to
4 Defendant's argument, the language of the Claims 1 and 18 dictates that "maxima" does not
5 refer to a single absolute maximum. (Pl.'s Reply Br. 10:20-11:2.) Specifically, the claims
6 require a "first maxima . . . corresponding to a first finger" and a "second maxima corresponding
7 to a second finger." (*Id.* at 10:22-24.) Accordingly, the claim language clearly provides the
8 necessary context from which a person of ordinary skill in the art would understand that the term
9 "maxima" does not refer to an absolute highest value.

10 Defendant further argues that the construction of this term must include the concept of
11 location. However, this proposal would introduce the concept of "location" into a term that is
12 generally understood as referring to "value." (*See* DeBruine Decl. Ex. B, at 5, ECF No. 167-2.)
13 For example, the dictionary that Plaintiff cites defines "maximum" as "[t]he greatest value
14 assumed by a function over a given interval" or "[t]he largest number in a set." (*See id.* (citing
15 *The American Heritage College Dictionary* 839 (3d ed. 1997).) Similarly, the dictionary that
16 Defendant cites defines "maximum" as "[t]he greatest value which a variable may have." (*See*
17 Ogden Decl. Ex. A, at 4, ECF No. 174-1 (citing *The New Shorter Oxford English Dictionary*
18 1720 (4th ed. 1993).) Moreover, when looking at the words of the written description, the Court
19 finds ample evidence that a person of ordinary skill in the art would read the '352 Patent as
20 using the term "maxima" to refer to a value, rather than a location. Specifically, when
21 discussing the related term "minima," the written description states that "[a]lthough the finger
22 profile shown in FIG. 3 suggests that the intermediate minima separate the two fingers is a zero
23 value, it is not necessary in all instances that the minima be zero." '352 Patent col.6 ll.39-42
24 (emphasis added). Thus, the written description's requirement that "minima" be a value
25 indicates that "maxima" must also be a value.

b. Exclusion of a Preferred Embodiment

“[A] claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.” *On-Line Tech. v. Bodenseewerk Perkin-Elmer*, 386 F.3d 1133, 1138 (Fed. Cir. 2004) (internal quotation marks and citations omitted). Even if the Defendant’s proposed construction found some support in the written description, the Court would still not adopt Defendant’s proposal because such a construction would result in excluding a preferred embodiment. Specifically, Defendant’s proposed construction would exclude the preferred embodiment represented by Fig. 3. This figure, as shown below, represents a finger profile that indicates the presence of two fingers in which the profile includes one or more “plateau maxima.” ’352 Patent col.6 ll.27-28. Plateau maxima represent those situations in which the maximum capacitance values appear over a range of locations on the touchpad, rather than in one discrete location. (Pl.’s Reply Br. 9:9-10.) The written description explicitly demonstrates that the mark at “85” represents “a first maxima” and the mark at “95” represents “another maxima.” ’352 Patent col.6 ll.28-31. These maxima represent first and second fingers “operatively coupled to the touchpad.” *Id.* at col.6 ll.33-35.

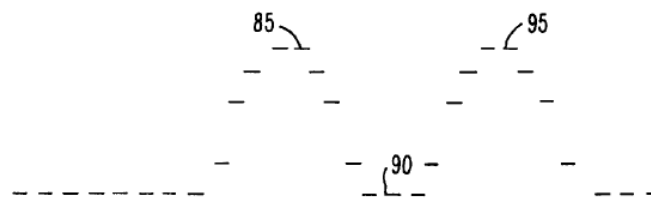


FIG. 3.

However, this embodiment would not be possible under Defendant’s proposed construction. Specifically, if the “maxima” corresponded to “the location at which a signal attains its highest value after increasing and before decreasing,” the maxima in Fig. 3 would\

1 actually be located to the right of where Fig. 3 marks each maxima.

2 **c. The Synaptics Litigation**

3 Finally, Plaintiff notes the similarity between Defendant's proposed construction and the
4 construction that was rejected by the Northern District of California in the *Synaptics* litigation.
5 Although the claim construction order from the *Synaptics* litigation is not binding on this Court,
6 it is persuasive. Specifically, the court in *Synaptics* determined that a construction that imposed
7 a positional or locational requirement could "twist the ordinary meaning of a 'maxima' or a
8 'minima' so as to exclude a plateau maxima, where the maximum capacitance value appears
9 over a range of X axis values and/or Y axis values." *Elantech Devices Corp. v. Synaptics, Inc.*,
10 No. 06-cv-01839-CRB, 2007 WL 1056782, at *9 (N.D. Cal. Apr. 6, 2007). Accordingly, the
11 *Synaptics* claim construction order further supports the Court's rejection of the Defendant's
12 proposed construction.

13 **2. Plaintiff's Proposed Construction**

14 Plaintiff requests that this Court construe term "maxima" as "highest value" or "peak
15 value." (Joint Statement Ex. A at 5, ECF No. 149-1.) After examining the words of the claims
16 that incorporate the term "maxima," the Court agrees that a person of ordinary skill in the art of
17 electrical engineering or computer science would understand the term "maxima" to simply mean
18 "highest value" or "highest peak." *See Phillips*, 415 F.3d at 1314-15 (citations omitted).
19 Specifically, as discussed above in Section V.B.1, the words of the claims, the words of the
20 written description, and the dictionary definitions supplied by both parties all support Plaintiff's
21 proposed construction.

22 **3. The Court's Construction**

23 After looking first to the words of the claim and then the remaining parts of the
24 specification, the Court finds that a person of ordinary skill in the art of electrical engineering or
25 computer science would understand the term "maxima," as used in the '352 Patent to mean

“highest value” or “peak value.” Therefore, the Court construes the term “maxima” as “highest value; peak value.”

C. “Minima”

Proposed Constructions

Elan	“lowest value”
Pixcir	“location at which a signal attains its lowest value after decreasing before increasing”

Much of the reasoning that applies to the construction of the term “maxima” also applies to the related term “minima.” First, as discussed above in Section V.B.1.a, adopting Defendant’s “location” construction would be contrary to the accepted meaning of the term “minima” in the art of electrical engineering or computer science. Second, as discussed in Section V.B.1.b, adopting Defendant’s proposed construction would exclude the preferred embodiment as shown in Fig. 3 of the ’352 Patent. Finally, as discussed in Section V.B.1.c, the Court’s adoption of Plaintiff’s proposed construction in this case is consistent with the Northern District of California’s construction in the *Synaptics* litigation.

1. The Court’s Construction

For the reasons stated above, after looking first to the words of the claim and then the remaining parts of the specification, the Court finds that a person of ordinary skill in the art of electrical engineering or computer science would understand the term “minima,” as used in the ’352 Patent to mean “lowest value.” Therefore, the Court construes the term “minima” as “lowest value.”

D. Identification Phrases

Proposed Constructions

“to . . . identify a first maxima in a signal corresponding to a first finger”	Elan	See “signal” and “maxima” above.
	Pixcir	“to identify a [first location at which a signal attains its highest value after increasing and before decreasing] in a [one-dimensional profile representing the degree of operative coupling at various

		positions, as conveyed from the touch sensor] taken on a line obtained from scanning the touch sensor”
“to . . . identify a minima following the first maxima”	Elan	See “signal” and “maxima” above.
	Pixcir	“to identify a minima in the signal taken on said line that occurs after the first maxima and before another maxima is identified”
“to . . . identify a second maxima in a signal corresponding to a second finger following said minima”	Elan	See “signal” and “maxima” above.
	Pixcir	“after identifying the minima in the signal taken on said line, to identify a second maxima in the signal taken on said line”

Plaintiff proposes that to construe the “Identification Phrases,” the Court need only insert its constructions for the terms “signal,” “minima,” and “maxima.” (Pl.’s Br. 12:2, ECF No. 165.) Plaintiff further contends that once the Court inserts these definitions into the Identification Phrases, these phrases need no further construction. (*Id.*) Defendant, on the other hand, argues that the words of the patent establish that there is a necessary spatial relationship and that there is a necessary temporal relationship between the minima and the two maxima. (Def.’s Resp. Br. 23, ECF No. 173.)

1. The Parties’ Proposed Constructions

Defendant first contends that the words of the patent require “a spatial sequence of maxima—minima—maxima.” (Def.’s Resp. Br. 23.) Thus, Defendant requests that the Court include in its construction that the “maxima” and the “minima” are “taken on a line obtained from scanning the touch sensor.” (Def.’s Resp. Br. 22-23.) Defendant further asserts that the words of the patent also require “a temporal sequence.” Specifically, Defendant argues that “the minima cannot be identified until after the first maxima is identified, and the second [maxima] cannot be identified until after the minima is identified.” (Def.’s Resp. Br. 23.) For the reasons discussed below, the Court disagrees with Defendant; the patent does not require a spatial

1 relationship between the maxima and the two minima. However, the Court agrees with
2 Defendant that the words of the claim require a temporal relationship.

3 ***a. Spatial Relationship***

4 Defendant provides very little authority for its assertion that the words of a patent require
5 a spatial sequence. In fact, Defendant's only support for this assertion lies in the *Apple*
6 litigation. (Def.'s Resp. Br. 22-23.) Specifically, Defendant notes that, in the *Apple* litigation,
7 the court "recognized the parties' agreement that the 'maxima' and 'minima' were 'taken on a
8 line obtained from scanning the touch sensor.'" (*Id.* at 22.)

9 This Court cannot adopt a proposed construction simply because the construction was the
10 subject of agreement in a previous dispute. The mere fact that the parties agreed to this
11 construction does not mean that the construction was correct. Because the parties to the *Apple*
12 litigation agreed on this construction, it was not critically examined by that court. Rather,
13 Defendant must support its proposed construction with language in the specification. Above all,
14 this Court must follow the Federal Circuit's instructions in *Phillips*, and look to the words of the
15 claims and the remainder of the specification to determine how a person of ordinary skill in the
16 art would define the disputed term. *Phillips*, 415 F.3d at 1313. Accordingly, Defendant must
17 establish that the specification requires the inclusion of "spatial sequence" language in the
18 construction of the Identification Phrases. Defendant has failed to do so. Thus, the Court
19 declines to include such a limitation in its construction of the Identification Phrases.

20 ***b. Temporal Relationship***

21 Defendant argues that the claim language requires that the individual steps of the claims
22 must be done in that specific order. Defendant also notes that a construction that requires this

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temporal sequence would be consistent with the claim construction order in the *Apple* litigation.⁴ For the reasons discussed below, the Court concludes that the words of the claims require that each step of Claim 1 and Claim 18 must be performed in the order in which they are written.

“Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one.” *Interactive Gift Exp., Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001) (citation omitted). “However, such a result can ensue when the method steps implicitly require that they be performed in the order written.” *Id.* at 1342-1343 (citations omitted). Courts use a two-part test for determining whether the steps of a method claim must be performed in the order in which they are written. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003) (citing *Interactive Gift*, 256 F.3d at 1342-43). First, courts “look to the claim language to determine if, as a matter of logic or grammar, [the steps] must be performed in the order written.” *Altiris*, 318 F.3d at 1369 (citation omitted). For example, in *Mantech Environmental Corp. v. Hudson Environmental Services, Inc.*, the parties disputed whether the language of Claim 1 of United States Patent No. 5,520,483 (the ‘483 Patent) required that the four steps be performed in the order written. 152 F.3d 1368, 1375-76 (Fed. Cir. 1998). The relevant method claim stated:

1. A method for remediating a hydrocarbon-contaminated region of a subterranean body of groundwater to destroy or reduce the initial concentration levels of hydrocarbon contaminants, comprising the steps of:

(a) providing a plurality of mutually spaced wells intersecting said groundwater region;

⁴ The *Apple* litigation carries more persuasive weight with respect to the temporal sequence argument than with the spatial sequence argument because, unlike the spatial sequence argument, the parties failed to reach an agreement on whether the claims required a temporal sequence before the claim construction stage of the litigation. Due to this dispute, the court in the *Apple* litigation was required to critically analyze the language of the claims and the language of the written description to determine whether the steps in this method claim were required to be performed in the order in which they are written. Such analysis of the words of the claims and the specification results in this Court viewing the claim construction order in the *Apple* litigation as carrying greater persuasive weight with respect to the inclusion of temporal sequence language than it did with respect to the inclusion of the spatial sequence language.

- 1 (b) providing a treating flow of acetic acid from one or more of said wells
2 into said groundwater region, to establish acidic conditions therein;
3 (c) introducing a turbulent flow of an aqueous solution of ferrous ion into
4 said groundwater region, for mixing with said acidified groundwater,
5 thereby providing a catalyst for disassociation of hydrogen peroxide; and
6 (d) providing a treating flow of hydrogen peroxide solution from one or
7 more of said wells into said groundwater region, said hydrogen peroxide
8 undergoing a Fenton-like reaction in the presence of said acidic
9 conditions and said ferrous ion to generate hydroxyl free radicals for
10 oxidizing said contaminants.

11 U.S. Patent No. 5,520,483 col. 9 ll. 33-51 (filed June 21, 1995). In reading the claims, the court
12 noted that each of the subsequent steps included language that referenced the previous step or at
13 least included language that logically indicated that the prior step had already been performed.

14 *Mantech*, 152 F.3d at 1375-76. Specifically, the court stated that:

15 [s]tep (a) provides the wells. No monitoring or injecting of the groundwater
16 can occur until wells are provided; hence, step (a) must be performed first.
17 Step (b) introduces acetic acid, via the wells provided in step (a), into the
18 groundwater of the contaminated region. Hence, in order to accomplish step
19 (b), the wells of step (a) must already have been provided. Step (c) introduces
20 an aqueous solution of ferrous ion into said groundwater region for mixing
21 with “*said acidified groundwater*” (emphasis added). In order for the aqueous
22 solution to mix with the acidified groundwater, the acid must have already
23 mixed with the groundwater to form acidified groundwater. Hence step (b)
24 necessarily comes before step (c). Step (d) introduces a treating flow of
25 hydrogen peroxide solution into the groundwater. The hydrogen peroxide
solution undergoes a Fenton-like reaction “in the presence of said acidic
conditions and said ferrous ion.” Because the acidic conditions and the ferrous
ion must be present before the hydrogen peroxide can undergo the Fenton-like
reaction, step (d) must come after both steps (b) and (c).

26 *Id.* Accordingly, the court held that “the sequential nature of the claim steps is apparent from
27 the plain meaning of the claim language and nothing in the written description suggests
28 otherwise.” *Id.* at 1376.

29 If, however, the court cannot resolve the question purely by looking to the language of
30 the claims, only then does the court look to “the rest of the specification to determine whether

1 [the rest of the specification] ‘directly or implicitly requires such a narrow construction.’” *Id.*
2 (citing *Interactive Gift*, 256 F.3d at 1343). If neither source reveals a need for the steps to be
3 completed in the order recited, then “the sequence in which such steps are written is not a
4 requirement.” *Altiris*, 318 F.3d at 1370.

5 In this case, the language of the claims demonstrates that the steps of these method claims
6 must be performed in the order in which they are written. The relevant language in Claim 1
7 provides a method in which a touch sensor is scanned “to (a) identify a first maxima in a signal
8 corresponding to a first finger, (b) identify a minima following the first maxima, (c) identify a
9 second maxima in a signal corresponding to a second finger following said minima.”⁵ Step (a)
10 provides the first maxima. Then, step (b) provides the minima but that minima must *follow* the
11 first maxima identified in step (a). Thus, this minima can only be identified *after* the maxima is
12 first identified; step (b) must come *after* step (a). Finally, step (c) states that a second maxima is
13 identified that *follows* “said minima.” Therefore, the second maxima cannot be identified until
14 the minima of step (b) is identified; step (c) must come *after* step (b). Given the language of the
15 claims themselves, the Court agrees with the Defendant that “the minima cannot be identified
16 until after the first maxima is identified, and the second [maxima] cannot be identified until after
17 the minima is identified.” (Def.’s Resp. Br. 23.)

18 Even if the words of the claim were insufficient, the Court agrees with the Northern
19 District of California’s conclusion in the *Apple* litigation that the rest of the specification also
20 “confirms that the process proceeds in order.” *Elan Microelectronics Corp. v. Apple, Inc.*, No.
21 09-cv-01531-RS, 2010 WL 4510909, at *5 (N.D. Cal. Nov. 1, 2010). Specifically, the court
22 stated that

23 [t]he specification confirms that the process proceeds in order. For example,
24 the specification explains that a variable is “initially” assigned a particular

25 ⁵ The language of Claim 18 is substantially similar and any distinctions between Claim 1 and Claim 18 have no effect on this analysis.

1 value to indicate that the algorithm is in the process of finding the first peak.
2 '352 patent at 9:41. When the first peak is found, the specification explains that
3 "[a]t this point, the peak has been found," but "the valley not yet been found."
4 *Id.* at 9:53, 9:66–67. "[E]ventually," the specification continues, the finger
5 profile will rise again "such that the valley has been detected." *Id.* at 10:2–4.
6 Yet "[a]s long as" the finger profile continues its upward trend, the second
7 peak has not yet been identified. *Id.* at 10:15–16. Finally, the finger profile
8 "will eventually start to decrease," at which point the second peak has been
9 found. *Id.* at 10:19–20.

7 *Id.* This language further indicates that the first maxima must be identified before the minima is
8 identified and that the minima must be identified before the second maxima is identified.

9 Plaintiff argues that the patent clearly does not require that the steps of the method be
10 performed in a particular order. Plaintiff contends that including the temporal sequence
11 language would amount to impermissibly limiting the claims to a particular embodiment. (Pl.'s
12 Reply Br. 11:17-19.) In addition, Plaintiff argues that the words of the written description
13 actually teach that the steps of the method can be performed in any order. (*Id.* at 11:21-25.) To
14 support its argument, Plaintiff cites to two sections of the written description. First, Plaintiff
15 notes that "the patent makes clear [that] [t]he sensors may be scanned sequentially or
16 concurrently." (*Id.* at 11:22-24 (citing '352 Patent col. 7, ll.36-40).) Second, Plaintiff cites to
17 broad boilerplate language that appears at the end of the written description just before the
18 claims:

19 [h]aving fully described various embodiments of the present invention,
20 numerous alternatives and equivalents which do not depart from the invention
21 will be apparent to those skilled in the art. It is therefore intended that the
22 invention not be limited by the foregoing description, but only by the appended
23 claims.

22 (Pl.'s Reply Br. 12:4-7 (citing '352 Patent col. 16, ll.6-12).)

23 The Court finds these arguments unpersuasive. True enough, the Federal Circuit has
24 cautioned courts to avoid limiting patent claims to a single embodiment, even when the patent
25 describes only a single embodiment. *Phillips*, 415 F.3d at 1323. Above all other evidence, the

1 words of the claims themselves control. *Id.* at 1312-13. However, the Court need not rely on the
2 embodiment described in the written description because the language of the claims themselves
3 supply the evidence needed to determine that “as a matter of logic or grammar, [the steps of the
4 method claim] must be performed in the order written.” *See Altiris*, 318 F.3d at 1369 (citation
5 omitted).

6 Plaintiff’s other arguments are similarly unpersuasive. Specifically, Plaintiff’s first
7 citation to the written description is insufficient to overcome the clear language of the claims.
8 Plaintiff’s second citation to the written description is similarly unpersuasive; this section of the
9 written description is mere boilerplate that fails to overcome the Court’s reading of the claims
10 themselves. *See, e.g., Wireless Agents LLC v. Sony Ericsson Mobile Commc’ns AB*, 189 F.
11 App’x 965, 967 (Fed. Cir. 2006)⁶ (concluding that boilerplate language at the end of the written
12 description that attempts to prevent the claims from being limited to a preferred embodiment
13 could not alter the court’s interpretation that the claims were, in fact, limited by the
14 specification); *Wavestream Corp. v. CAP Wireless, Inc.*, No. 05-cv-4254-SJO-MCX, 2006 WL
15 5104656, at *7-8 (C.D. Cal. Nov. 13, 2006) (noting that boilerplate that attempts to prevent the
16 claims from being limited to a preferred embodiment is “merely statement[s] of the law of claim
17 construction” and “does not describe variations” in the invention that would “give any
18 information to a person of skill in the art which would change the person’s understanding”).

19 For these reasons, the Court agrees with Defendant that the construction of the
20 Identification Phrases requires the inclusion of temporal sequence language.

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24 ⁶ The Court recognizes that *Wireless Agents* was designation “not for publication” and was decided prior to
25 January 1, 2007. *See* Fed. R. App. P. 32.1. Thus, the Federal Circuit may prohibit parties from citing this case to
the Federal Circuit. *See* Fed. Cir. R. 32.1 (“Parties are not prohibited or restricted from citing nonprecedential
dispositions issued after January 1, 2007”). Nevertheless, the Court cites *Wireless Agents* here as further support
for this somewhat obvious proposition that a mere boilerplate recitation of the state of claim construction law
cannot broaden the patent claims beyond the words of the patent.

2. The Court's Construction

For the reasons stated above, after looking first to the words of the claim and then the remaining parts of the specification, the Court finds that a person of ordinary skill in the art of electrical engineering or computer science would understand these phrases as requiring a “temporal sequence” language. However, a person of ordinary skill in the art would not understand these phrases as requiring a “spatial sequence.”

a. “to . . . identify a first maxima in a signal corresponding to a first finger”

After incorporating the Court's adopted constructions for the terms “maxima” and “signal,” the Court construes the phrase “to . . . identify a first maxima in a signal corresponding to a first finger” as “to . . . identify a first highest or peak value in an electronic digital value corresponding to a first finger.”

b. “to . . . identify a minima following the first maxima”

After incorporating the Court's adopted constructions for the terms “maxima,” “minima,” and “signal,” the Court construes the phrase “to . . . identify a minima following the first maxima” as “to . . . identify a lowest value that occurs after the first highest or peak value and before another highest or peak value is identified.”

c. “to . . . identify a second maxima in a signal corresponding to a second finger following said minima”

After incorporating the Court's adopted constructions for the terms “maxima,” “minima,” and “signal,” the Court construes the phrase “to . . . identify a second maxima in a signal corresponding to a second finger following said minima” as “to . . . identify a second highest or peak value in the electronic digital signal corresponding to a second finger after identifying the lowest value in the electronic digital signal.”

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E. “In response to”**Proposed Constructions**

Elan	Plain Meaning
Pixcir	“in reaction to, without utilizing additional information”

Plaintiff argues that the Court need not construe this term because it is a “common phrase needing no construction.” (Pl.’s Br. 8:7, ECF No. 165.) Furthermore, Plaintiff contends that Defendant’s proposed construction is inconsistent with the words of the patent and inconsistent with a preferred embodiment disclosed in the written description. (*Id.* 8:15-21.) Defendant, on the other hand, argues that without proper construction, this term could result in Plaintiff impermissibly broadening the scope of the patent beyond the words of the specification. (Def.’s Resp. Br. 14, ECF No. 173.)

1. The Parties’ Proposed Constructions

Plaintiff contends that the phrase “in response to” needs no further construction. (Joint Statement, Ex. A at 3, ECF No. 149-1.) Plaintiff further argues that when, such as here, the language is “clear on its face,” the language needs no further construction because “no further understanding or explanation is needed.” (Pl.’s Br. 8:9-10.) In contrast, Defendant contends that the phrase should be construed as “in reaction to, without utilizing additional information.” (Joint Statement, Ex. A at 3, ECF No. 149-1.) Defendant’s primary concern results from the possibility that the plain meaning could result in Plaintiff impermissibly broadening the scope of the patent. Specifically, Defendant argues that the claim language provides no indication that any further information, beyond the identification of two maxima, is used to “indicat[e] . . . the simultaneous presence of two fingers.” (Def.’s Resp. Br. 14 (citing ’352 Patent col.16, ll.21-23).) Therefore, Defendant contends, any construction that could allow for the consideration of additional information must be incorrect. (Def.’s Resp. Br. 14.)

“The construction of claims is simply a way of elaborating the normally terse claim

1 language in order to understand and explain, but not to change, the scope of the claims.” *Terlep*
2 *v. Brinkmann Corp.*, 418 F.3d 1379, 1382 (Fed. Cir. 2005) (citations omitted). Furthermore,
3 when the claim language is “clear on its face,” then the Court’s “consideration of the rest of the
4 intrinsic evidence is restricted to determining if a deviation from the clear language of the claims
5 is specified.” *Interactive Gift Exp., Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed Cir.
6 2001). Here, the phrase “in response to” needs no further construction; this is not the type of
7 “terse claim language” that needs further elaboration before the jury will understand the
8 meaning of the phrase.

9 Furthermore, Defendant has failed to pinpoint language in the specification that
10 contradicts the plain, ordinary meaning of this phrase. Although Defendant attempts to rely on
11 portions of the written description and the prosecution history, these attempts fail to persuade
12 the Court. True enough, the written description does explain that the identification of the two
13 maxima leads to the indication that two fingers are present. *See e.g.*, ’352 Patent col.6 ll.29-35.
14 However, nothing in the specification explicitly precludes the consideration of additional
15 information. In fact, an analysis of Figures 9-1 and 9-2 of the ’352 Patent reveals that the
16 simultaneous presence of two fingers is detected only after consideration of significant amounts
17 of information beyond just the identification of two maxima. Specifically, the written
18 description explains a series of steps that must be undertaken before the presence of two fingers
19 is indicated. *See* ’352 Patent col.9 ll.52-54, col.10 ll.19-65. Thus, as Plaintiff recognizes, the
20 preferred embodiment shown in Figures 9-1 and 9-2 “teaches that ‘additional information’ can
21 and should be utilized before an indication is provided ‘in response to’ the earlier identification
22 of two maxima.” (Pl.’s Reply Br. 4:23-5:18.)

23 Defendant’s reliance on the prosecution history is similarly unpersuasive. The doctrine
24 of prosecution history estoppel applies only when “the patentee has unequivocally disavowed a
25 certain meaning to obtain his patent.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324

1 (Fed. Cir. 2003); *see also Seachange Int'l, Inc. v. C-COR Inc.*, 413 F.3d 1361, 1373 (Fed. Cir.
2 2005) (holding that to narrow the scope of claim language, a prosecution history disclaimer must
3 be “clear and unambiguous”). Defendant argues that during prosecution the patentee limited the
4 scope of the claim language when it distinguished its invention over prior art that also detected
5 the presence of two fingers. (Def.’s Resp. Br. 15.) Specifically, the patentee stated that its
6 invention differed from the prior art because “[t]he present invention uniquely utilizes the
7 detection of two maxima to determine if two fingers are present on the touchpad.” Contrary to
8 Defendant’s assertion, this statement merely notes that the prior art reference, about which the
9 examiner was concerned, did not use the detection of two maxima to indicate the simultaneous
10 presence of two fingers. By this statement, the patentee was simply acknowledging that the
11 invention of the ’352 Patent accomplished the identification of two fingers in a manner that was
12 different from the prior art. Such a statement, proclaiming the unique aspect of the invention, is
13 not a “clear and unambiguous” statement of disclaimer.

14 Finally, the Court rejects Defendant’s reliance on the *Apple* litigation. As discussed
15 above, although the Court may look to such an interlocutory order as persuasive authority, it is
16 not binding on the Court. However, the *Apple* litigation has no persuasive effect as to the
17 construction of “in response to” because the court did not actually construe “in response to.” *Id.*
18 True enough, in the *Apple* litigation, the court noted that “Apple has persuasively shown that the
19 invention claimed in the ’352 patent utilizes the identification of a first and second maxima,
20 without some amalgam of additional information to determine and indicate the simultaneous
21 presence of two fingers.” *Elan Microelectronics Corp. v. Apple, Inc.*, No. 09-cv-01531-RS, 2010
22 WL 4510909, at *7 (N.D. Cal. Nov. 1, 2010). Nevertheless, the court deferred its construction
23 to a later date if a need to construe the phrase arose. *Id.* Given the court’s refusal to construe
24 this term contrary to its plain meaning, this Court is not persuaded by the language that
25 Defendant has cherry-picked from the claim construction order in the *Apple* litigation.

2. The Court's Construction

After looking first to the words of the claim and then the remaining parts of the specification, the Court finds that a person of ordinary skill in the art of electrical engineering or computer science would understand the '352 Patent to use the phrase "in response to" in accordance with that phrase's plain meaning. This phrase needs no further construction.

F. "Operative coupling"

Proposed Constructions

Elan	"finger induced electrical effect"
Pixcir	"finger-induced effect"

Plaintiff argues that Defendant's proposed construction fails to recognize "the context of the use of the term in the patent." (Pl.'s Br. 7:27-8:2, ECF No. 165.) Defendant, on the other hand, argues that Plaintiff's proposed construction imports an extraneous limitation from the specification. (Def.'s Resp. Br. 13, ECF No. 173.) Defendant's primary concern with Plaintiff's proposed construction is that it "impermissibly narrow[s] the meaning of the term by importing an extraneous limitation from the specification in to the claims." (*Id.* at 11.)

1. The Parties' Proposed Constructions

Plaintiff proposes that the Court construe the phrase "operative coupling" as a "finger induced electrical effect." (Joint Statement, Ex. A at 2, ECF No. 149-1.) In contrast, Defendant proposes that the Court construe the phrase as "finger-induced effect." (*Id.*) Thus, the core of the parties' disagreement relates to Plaintiff's characterization of "operative coupling" as an *electrical* effect. For the reasons discussed below, the Court rejects Defendant's proposed construction and will adopt Plaintiff's proposed construction.

Defendant correctly notes that although the Court reads the claims in light of the specification, the Court must "avoid the danger of reading limitations from the specification into the claim." *Phillips*, 415 F.3d at 1323. However, if the Court were to adopt Defendant's

1 proposed construction, the Court would have to ignore the context in which this claim arises.
2 Specifically, the written description explains that the presence of multiple fingers is detected by
3 measuring the change in capacitance and then converting that analog value to a digital value
4 and, as discussed above in Section V.A.2, capacitance is an electrical concept. *See* '352 Patent
5 col.5, ll. 35-51. Additionally, the Court must interpret the claim language from the perspective
6 of a person of ordinary skill in the art of electrical engineering or computer science. *Phillips*,
7 415 F.3d at 1332 (citation omitted). Such a person would not read the term “operative
8 coupling,” as used in the '352 Patent, as referring to a magnetic, optical, or mechanical effect.
9 Given the language in the specification, a person of ordinary skill in the art of electrical
10 engineering or computer science would conclude that the '352 Patent uses the phrase “operative
11 coupling” to refer to an electrical effect.

12 Finally, Defendant fails to refer to any language in the specification that indicates that
13 this coupling could be anything but electrical. In fact, Defendant supports its argument that this
14 coupling should not be limited to electrical only by referring to an unrelated patent, U.S. Patent
15 No. 5,483,235, and the use of the term “operative coupling” in that patent. (Def.’s Resp. Br. 13.)
16 The Court finds this argument unpersuasive. First, as extrinsic evidence, this unrelated patent
17 carries much less persuasive weight than the specification of the '352 Patent. Second, the
18 Federal Circuit has cautioned that courts should not use extrinsic evidence to vary the definition
19 of a term from that term’s usage in the specification. *Phillips*, 415 F.3d at 1318-19 (“[U]ndue
20 reliance on extrinsic evidence poses the risk that it will be used to change the meaning of claims
21 in derogation of the indisputable public records consisting of the claims, the specification and
22 the prosecution history” (internal quotation marks and citation omitted)). Finally, what little
23 persuasive weight this patent carries is even further diminished by the fact that the patent is in an
24 unrelated field. Indeed, the patent states that it “relates generally to the field of alphabetic or
25 alphanumeric keyboards for information input devices and specifically to the arrangement of

1 keys for a stylus-based keyboard in which text is entered by touching a stylus to successive
2 letters on the keyboard.” U.S. Patent No. 5,483,235 col.1 ll.5-9 (filed Feb. 23, 1994). The patent
3 further explains that the invention is designed to improve “small, stylus based keyboards” by
4 “arrang[ing] the keys on a stylus-based keyboard so that keys which are more likely to be typed
5 in immediate succession are placed in closer proximity to one another than keys which are less
6 likely to be consecutively typed.” ’235 Patent col.2 ll.10-17. Thus, the inventive aspect of this
7 unrelated patent appears to be the arrangement of the keys on a keyboard. Furthermore, the
8 patent offers little description of the interaction of the stylus with the keyboard. As such, the
9 usage of the phrase “operative coupling” in the unrelated patent that Defendant cites fails to
10 persuade the Court “operative coupling” is anything but a “finger-induced electrical effect.”

11 **2. The Court’s Construction**

12 After looking first to the words of the claim and then the remaining parts of the
13 specification, the Court finds that a person of ordinary skill in the art of electrical engineering or
14 computer science would understand the term “operative coupling,” as used in the ’352 Patent, to
15 mean “finger induced electrical effect.” Therefore, the Court construes the term “operative
16 coupling” as “finger induced electrical effect.”

17 **VI. CONSTRUCTION OF THE MEANS-PLUS-FUNCTION LIMITATIONS**

18 **A. Legal Standard**

19 The parties to this action also dispute the meaning and scope of four of the claims in the
20 ’352 Patent that incorporate “means-plus-function” limitations. (*See* Def.’s Resp. Br. 24-28,
21 ECF No. 173.) However, neither party disputes that these limitations have, in fact, been drafted
22 in means-plus-function format. Therefore, the Court need only identify the recited function in
23 each claim and the structure disclosed in the written description that corresponds to that
24 function.

25 The Patent Act authorizes patentees to draft claims in a “means-plus-function” format.

1 *See* 35 U.S.C. § 112(f).⁷ This format provides a simple and convenient format for claiming an
2 inventive structure by reciting its function, rather than the structure itself. *See id.*; *Kemco Sales,*
3 *Inc. v. Control Papers Co.*, 208 F.3d 1352, 1360 (Fed. Cir. 2000). In exchange for this
4 convenience, however, the Patent Act explicitly limits the construction of such claims “to cover
5 the corresponding structure, materials, or acts described in the specification and equivalents
6 thereof.” 35 U.S.C. § 112(f); *Kemco*, 208 F.3d at 1360.

7 Construction of means-plus-function limitations requires that courts undertake a two-step
8 analysis. *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed.
9 Cir. 2003). First, the court identifies the function recited within the claim limitation. *Id.* For
10 this inquiry, the court looks entirely to the language of the claim at issue. *Id.* Second, the court
11 looks to the specification and identifies the corresponding structure, act, or material that
12 performs the recited function. *Id.* A structure is “corresponding structure” only if that element is
13 necessary to perform the function recited in the claim and if the specification or prosecution
14 history clearly links or associates that structure to the function recited in the claim. *Asyst Techs.,*
15 *Inc. v. Empak, Inc.*, 268 F.3d 1364, 1370 (Fed. Cir. 2001) (quoting and citing *B. Braun Med.,*
16 *Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)). “Moreover, failure to disclose
17 adequate structure corresponding to the recited function . . . results in the claim being of
18 indefinite scope, and thus invalid . . .” *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376
19 (Fed. Cir. 2001) (citation omitted). However, because under 35 U.S.C. § 282(a) patents are
20 presumed valid, a party attempting to overcome this presumption of validity must carry a heavy
21 burden; invalidity must be proven by clear and convincing evidence. *Budde*, 250 F.3d at 1376
22 (citations omitted). “Thus, a challenge to a claim containing a means-plus-function limitation as
23

24 ⁷ Both parties refer to the section of the statute that authorizes means-plus-function claiming as 35 U.S.C. § 112,
25 ¶ 6. The Court recognizes that this citation format has been used for decades. *See* 35 U.S.C. § 112 (amended
2011). However, after the America Invents Act, this same section is now properly cited as 35 U.S.C. § 112(f).
Accordingly, the Court will refer to the former § 112, ¶ 6 as § 112(f).

1 lacking structural support requires a finding, by clear and convincing evidence, that the
 2 specification lacks disclosure of structure sufficient to be understood by one skilled in the art as
 3 being adequate to perform the recited function.” *Id.* at 1376-77.

4 **B. Construction of the means-plus-functions limitations on which**
 5 **the parties agree**

6 The parties have submitted four (4) means-plus-function limitations on which they agree
 7 as to the recited function and the corresponding structure. (Def.’s Resp. Br. 10.) The Court
 8 hereby adopts those proposed constructions. Therefore, the Court construes the four terms as
 9 follows.

10 **1. “means for scanning the touch sensor to (a) identify a first maxima**
 11 **in a signal corresponding to a first finger.”(Claim 18)**

12 First, the parties agree that this language recites the function of “scanning the touch
 13 sensor to identify a first maxima in a signal corresponding to a first finger.” (Def.’s Resp. Br.
 14 10.) Second, the parties agree that this function is accomplished using the

15 [a]nalog multiplexor 45; capacitance measuring circuit 70; analog to digital
 16 convertor 80; microcontroller 60, hardware logic or host device software
 17 executing: (a) Fig. 5 (items 400, 410 or 405, and 430 or 440) and Fig. 6-1
 18 (items 200, 205, 210-215, 225-235) or (b) Fig. 8 (items 400, 410 or 405, and
 19 430 or 440) and Fig. 9-1 (items 200, 205, 210-215, 225-235); and associated
 20 text, and their equivalents.

21 (*Id.*) Given the parties’ agreement, the Court adopts this function and corresponding structure as
 22 the construction of “means for scanning the touch sensor to (a) identify a first maxima in a
 23 signal corresponding to a first finger.”

24 **2. “means for scanning the touch sensor to . . . (b) identify a minima**
 25 **following the first maxima” (Claim 18)**

26 First, the parties agree that this language recites the function of “scanning the touch
 27 sensor to . . . identify a minima following the first maxima.” (Def.’s Resp. Br. 10.) Second, the

1 parties agree that this function is accomplished using the

2 [a]nalog multiplexor 45; capacitance measuring circuit 70; analog to digital
3 convertor 80; microcontroller 60, hardware logic, or host device software
4 executing: (a) Fig. 5 (items 400, 410 or 405, and 430 or 440) and Fig. 6-1
5 (items 200, 205, 210-215, 225-262) or (b) Fig. 8 (items 400, 410 or 405, and
6 430 or 440) and Fig. 9-1 (items 200, 205, 210-215, 225-262); and associated
7 text, and their equivalents.

8 (*Id.*) Given the parties' agreement, the Court adopts this function and corresponding structure as
9 the construction of "means for scanning the touch sensor to . . . (b) identify a minima following
10 the first maxima."

11 **3. "means for scanning the touch sensor to . . . (c) identify a second
12 maxima in a signal corresponding to a second finger following
13 said minima" (Claim 18)**

14 First, the parties agree that this language recites the function of "scanning the touch
15 sensor to . . . (c) identify a second maxima in a signal corresponding to a second finger
16 following said minima." (Def.'s Resp. Br. 10.) Second, the parties agree that this function is
17 accomplished using the

18 [a]nalog multiplexor 45; capacitance measuring circuit 70; analog to digital
19 convertor 80; microcontroller 60, hardware logic, or host device software
20 executing: (a) Fig. 5 (items 400, 410 or 405, and 430 or 440) and Fig. 6-1
21 (items 200, 205, 210-215, 225-278) or (b) Fig. 8 (items 400, 410 or 405, and
22 430 or 440) and Fig. 9-1 (items 200, 205, 210-215, 225-278); and associated
23 text, and their equivalents.

24 (*Id.*) Given the parties' agreement, the Court adopts this function and corresponding structure as
25 the construction of "means for scanning the touch sensor to . . . (c) identify a second maxima in
a signal corresponding to a second finger following said minima."

26 **4. "means for providing an indication of the simultaneous presence
27 of two fingers in response to identification of said first and second
28 maxima" (Claim 18)**

29 First, the parties agree that this language recites the function of "providing an indication
30 of the simultaneous presence of two fingers in response to identification of said first and second

1 maxima.” (Def.’s Resp. Br. 11.) Second, the parties agree that this function is accomplished
2 using the

3 [m]icrocontroller 60 and/or software, firmware, or hardware executing any one
4 of the disclosed algorithms, e.g., Fig. 5 (item 540), Fig. 6-2 (item 310), Fig. 8-1
5 (item 860), Fig. 8-2 (item 915), and Fig. 9-1 (item 980) and associated text,
and their equivalents.

6 (*Id.*) Given the parties’ agreement, the Court adopts this function and corresponding structure as
7 the construction of “means for providing an indication of the simultaneous presence of two
8 fingers in response to identification of said first and second maxima.”

9 **C. Construction of the disputed means-plus-function limitations**

10 The parties to this action also dispute the meaning and scope of four of the “means-plus-
11 function” limitations in the ’352 Patent. The parties agree that these limitations are drafted in
12 means-plus-function format and, thus, the requirements of 35 U.S.C. § 112(f) apply. The parties
13 also agree on the function that each of these four means-plus-function limitations recites.
14 However, the parties disagree on the structure that corresponds to each of these functions.
15 Plaintiff contends that the specification recites adequate structure to support the function.
16 Defendant, on the other hand, asserts that each of these claims is indefinite for failing to disclose
17 adequate structure to correspond to the recited function and, thus, the claims are invalid.
18 Specifically, Defendant argues that the ’352 Patent discloses only a general purpose computer as
19 the structure and fails to disclose an actual algorithm to be performed on that general purpose
20 computer.

21 To avoid “pure functional claiming,” means-plus-function limitations are limited to the
22 particular structures disclosed in the specification, and their equivalents. *Aristocrat Techs.*
23 *Austl. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008); *see also Med.*
24 *Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2003) (“If
25 the specification is not clear as to the structure that the patentee intends to correspond to the

1 claimed function, then the patentee has not paid the price but is attempting to claim in functional
2 terms unbounded by any reference to structure in the specification”). For this reason, “[i]n cases
3 involving a computer-implemented invention in which the inventor has invoked means-plus-
4 function claiming, [the Federal Circuit] has consistently required that the structure disclosed in
5 the specification be more than simply a general purpose computer or microprocessor.”
6 *Aristocrat Techs.*, 521 F.3d at 1333. Reliance on a general purpose computer results in
7 impermissible “pure functional claiming.” *See id.* However, “a general purpose computer
8 *programmed to carry out a particular algorithm* creates a ‘new machine’ because a general
9 purpose computer ‘in effect becomes a special purpose computer once it is programmed to
10 perform particular functions pursuant to instructions from program software.” *Id.* (emphasis
11 added) (citation omitted). In such a situation, patentees must state the algorithm that
12 accomplishes the recited function in order to avoid the claim being found invalid. *Id.*

13 **1. “means for selecting an appropriate control function based on a**
14 **combination of a number of fingers detected, and any movement**
15 **of said fingers” (Claim 19)**

16 As with each of the disputed means-plus-function limitations, Defendant contends that
17 the specification fails to recite adequate structure to support the function recited in Claim 19.
18 (Def.’s Resp. Br. 24.) With respect to this claim term, Defendant argues that the ’352 Patent
19 fails to recite the requisite algorithm. Defendant asserts that, although the ’352 Patent may
20 recite algorithms at some point in its specification, the specification of the ’352 Patent fails to
21 describe an algorithm that provides the requisite step-by-step instructions to “select[] an
22 appropriate control function.”

23 In response, Plaintiff contends that the algorithm is described in Figures 7A-F and
24 associated text; column 2, lines 38 through 41; column 2, line 56 through column 4, line 17;
25 column 11, lines 15 through 35; and column 11, line 55 through column 12, line 58. None of
these passages recite an algorithm for “selecting an appropriate control function.” True enough,

1 the passage describes different types of control functions. For example, the patent explains that
2 “the relative motion of a single finger *can be defined* to mean cursor movement.” ’352 Patent
3 col.13 ll.4-7. The patent further explains that “such sequences . . . can be mapped to control
4 functions in *numerous ways*, but one reasonable definition is that the presence of two fingers
5 engaged in relative motion is a ‘drag function,’ such as where an entity was selected by the first
6 tap and dragged to a new location, where it is dropped by the removal of both fingers . . .” ’352
7 Patent col.13 ll.16-22. Although these passages refer to various control functions, nowhere in
8 these passages does the ’352 Patent explain *how* such control functions are *selected*, as required
9 by the language of this means-plus-function limitation.

10 In an attempt to overcome this deficiency, Plaintiff repeatedly asserts that the ’352 Patent
11 includes adequate structure from which a person of ordinary skill in the art could determine how
12 the control function is selected. However, it is insufficient “for the patentee simply to state or
13 later argue that persons of ordinary skill in the art would know what structures to use to
14 accomplish the claimed function.” *Aristocrat Techs.*, 521 F.3d at 1337. Moreover, Plaintiff’s
15 argument confuses the enablement requirement with the requirement that the claims be of
16 definite scope. Specifically, “[e]nablement of a device requires only the disclosure of sufficient
17 information so that a person of ordinary skill in the art could make and use the device.”
18 *Aristocrat Techs.*, 521 F.3d at 1336. The disclosure required by § 112(f), on the other hand,
19 “serves the very different purpose of limiting the scope of the claim to the particular structure
20 disclosed, together with equivalents.” *Id.*; *see also Biomedino, LLC v. Waters Techs. Corp.*, 490
21 F.3d 946, 953 (Fed. Cir. 2007) (“The inquiry is whether one of skill in the art would understand
22 the specification itself to disclose a structure, not simply whether that person would be capable
23 of implementing that structure”); *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374,
24 1380 (Fed.Cir.1999) (agreeing that “consideration of the understanding of one skilled in the art
25 in no way relieves the patentee of adequately disclosing sufficient structure in the specification”).

1 The Court finds that the '352 Patent lacks the required disclosure of the structure that
2 accomplishes the function recited in Claim 19; the patent fails to explain how the invention
3 “select[s] an appropriate control function.” Accordingly, the Court concludes that Defendant
4 has established by clear and convincing evidence that Claim 19 is indefinite and, thus, invalid.

5 **2. “means for detecting a distance between said first and second**
6 **maxima” (Claim 24)**

7 Generally, a patentee cannot fulfill its obligation to disclose adequate structure by
8 referring to a general purpose computer. *Aristocrat Techs.*, 521 F.3d at 1333. However, a
9 patentee may use a general purpose computer to satisfy this duty when the recited function “can
10 be achieved by any general purpose computer *without special programming*.” *In re Katz*
11 *Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (emphasis
12 added). Whenever this is true, the patentee need not disclose more structure than the general
13 purpose processor that performs the recited function. *Id.* For example, in *Katz*, the district court
14 invalidated seven claims drafted in means-plus-function form because the only structure
15 disclosed in the specification was a general purpose computer. *Id.* at 1313. Ultimately the
16 Federal Circuit reversed because the “seven claims [did] not run afoul of the rule against purely
17 functional claiming, because the functions of ‘processing,’ ‘receiving,’ and ‘storing’ are
18 coextensive with the structure disclosed, i.e., a general purpose processor.” *Id.* at 1316.

19 Neither party disputes that the '352 Patent, at least, discloses a general purpose computer.
20 Defendant argues that Claim 24 of the '352 Patent is invalid as indefinite because the
21 specification fails to disclose an algorithm that would transform that general purpose computer
22 into a special purpose computer. In contrast, Plaintiff argues that “detecting a distance between
23 said first and second maxima” can be accomplished using basic mathematical concepts such as
24 “the Pythagorean identity to calculate and report a single value with a unit representing the
25 distance between” the two maxima. (MacKenzie Decl., ¶ 30, ECF No. 167.) Plaintiff further

1 argues that using the Pythagorean identity to calculate and report a single value with a unit
2 representing the distance between the touches is so mathematically basic that any general
3 purpose computer could achieve that result without special programming.” Thus, Plaintiff
4 contends, the ’352 Patent need not disclose any structure in addition to the disclosed general
5 purpose computer or microprocessor.

6 For the reasons stated above, the Court finds that Defendant has failed to establish by
7 clear and convincing evidence that Claim 24 is invalid as indefinite. Similar to the claims in
8 *Katz*, Claim 24 recites a function that can be performed by a general purpose computer without
9 special programming. Accordingly, the Court agrees with Plaintiff; for the function recited in
10 Claim 24, the specification need not disclose structure beyond a general purpose computer.
11 Because the ’352 Patent discloses a general purpose computer, Claim 24 is not indefinite.
12 Therefore, contrary to Defendant’s assertions, Claim 24 is not invalid as indefinite.

13 The Court further agrees with Plaintiff that the structure that corresponds to the function
14 of “detecting a distance between said first and second maxima,” is a “[m]icrocontroller 60
15 and/or software, firmware, or hardware logic to calculate the difference between the coordinates
16 of the first and second maxima,” (Joint Statement Ex. A, at 14, ECF No. 149-1).

17 **3. “means for providing a click function in response to the removal**
18 **and reappearance of said second maxima within a predetermined**
period of time” (Claim 26)

19 Likewise, Defendant has failed to establish by clear and convincing evidence that Claim
20 26 is invalid. As with Claims 19 and 24, Defendant argues that the ’352 Patent impermissibly
21 fails to disclose anything beyond a general purpose computer as the structure that corresponds to
22 the function recited in the claim. However, Plaintiff contends that Figures 7-B, 8-1, and 8-2,
23 and the associated text, provide the requisite algorithm to transform the general purpose
24 computer into a special purpose computer. Defendant’s only response to Plaintiff’s position is
25 that “the flowchart itself is not the algorithm Elan is referring to.” (Def.’s Resp. Br. 27, ECF No.

1 173.) Rather, Defendant argues, this “‘algorithm’ is something that Elan is just now disclosing
2 in its brief, some 16 years after the application was filed.” (*Id.*)

3 Defendant’s conclusory statements without citations or additional explanation fail to
4 persuade the Court, by clear and convincing evidence, that the specification lacks adequate
5 structure. An algorithm is simply “[a] fixed step-by-step procedure for accomplishing a given
6 result; usually a simplified procedure for solving a complex problem, also a full statement of a
7 finite number of steps.” *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1384-85 (Fed.
8 Cir. 2011) (citation omitted). Furthermore the Federal Circuit has explicitly stated that
9 “[p]recedent and practice permit a patentee to express [the] procedural algorithm ‘in any
10 understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any
11 other manner that provides sufficient structure.’” *Typhoon Touch Techs.*, 659 F.3d at 1385
12 (emphasis added) (quoting *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir.
13 2008)). Defendant’s arguments simply assert that the flowchart in Figures 7-B, 8-1, and 8-2 are
14 not flowcharts. Defendant fails to explain *why* these flowcharts are inadequate. Defendant
15 cannot carry its burden to prove by clear and convincing evidence that the claim is invalid with
16 such a gap in reasoning.

17 For these reasons, the Court first finds that Claim 24 is not invalid as indefinite. The
18 Court further finds that the specification discloses adequate structure to correspond to the
19 function of “providing a click function in response to the removal and reappearance of said
20 second maxima within a predetermined period of time.” Because Defendant asserts that the
21 specification lacks structure that corresponds to the stated function, Defendant has not provided
22 proposed structure for this claim. Furthermore, Plaintiff’s proposed structure adequately
23 discloses an algorithm, or step-by-step procedure, that provides the click function as required by
24 the claim language. Therefore, the Court adopts Plaintiff’s proposed structure: a
25 “[m]icrocontroller 60, and hardware logic or host software performing the algorithms disclosed,

e.g., Figs. 7A-7F, 8, and 9; Col. 13:1-15:31, and their equivalents.”

4. “means for calculating first and second centroids corresponding to said first and second fingers” (Claim 30)

Likewise, Defendant has failed to establish by clear and convincing evidence that Claim 30 is invalid. As with Claims 19, 24, and 26, Defendant argues that the ’352 Patent impermissibly fails to disclose adequate structure to correspond to the function recited in the claim. Plaintiff contends that Figure 6, and the associated text, provide the requisite algorithm to transform the general purpose computer into a special purpose computer. Both parties reference the same portion of the written description:

In accordance with the present invention, two approaches may be used in calculating centroid values. In a first implementation, only a single centroid value is calculated for the combination of one or more fingers. In this arrangement, it will be apparent that, when a second finger contacts the touchpad, the centroid ‘jumps’ laterally approximately to the midpoint of the two fingers. In a second implementation, a centroid value may be calculated for each maxima, yielding multiple centroid values when multiple fingers interact with the pad. For purposes of clarity, the following description will be limited to the first implementation.

’352 Patent col.10 ll.31-45. This passage discloses the manner in which a single centroid could be calculated (’352 Patent col.10 ll.35-40) and then explains that, when multiple fingers contact the touchpad, “a centroid value may be calculated for each maxima, yielding multiple centroid values . . .” (’352 Patent col.10 ll.40-43). The passage then states that for the sake of clarity, the description is limited to the calculation of a single centroid. ’352 Patent col.10 ll.43-45.

Naturally, the parties advocate conflicting interpretations of this passage. Defendant attempts to carry its heavy burden by contending that the final sentence of this passage “[e]xplicitly limit[s] the disclosure to the description of an algorithm for calculating ‘only a single centroid value.’” (Def.’s Resp. Br. 28, ECF No. 173 (citing ’352 Patent col.10 ll.31-45).) Defendant further asserts that this sentence “all but acknowledges that there is no disclosure of

an algorithm for calculating two centroids.” (Def.’s Resp. Br. 28.) In contrast, Plaintiff asserts that this passage simply “instructs a practitioner having ordinary skill in the art at the time the ’352 patent was filed that calculating a centroid for each of two fingers contacting the touchpad surface involves applying the same formula disclosed in step 295 twice, once for each maxima detected.” (Pl.’s Br. 22:6-9, ECF No. 165.)

Based on these arguments and an analysis of the words of the patent, the Court concludes that Defendant has failed to carry its burden of establishing by clear and convincing evidence that Claim 30 is invalid as indefinite. The Court further concludes that the specification discloses adequate structure to correspond to the function of “calculating first and second centroids corresponding to said first and second fingers.” Because Defendant asserts that the specification lacks structure that corresponds to the stated function, Defendant has not provided proposed structure for this claim. Furthermore, Plaintiff’s proposed structure discloses an algorithm, or step-by-step procedure, that, if done twice, will calculate two centroids as required by the claim language. Therefore, the Court adopts Plaintiff’s proposed structure: an “[a]nalog multiplexor 45: Capacitance measuring circuit 70: A to D convertor 80, Microcontroller 60 and/or software, firmware or hardware executing the disclosed algorithm, e.g., Fig 6-1, items 220 and 295, 9-1, items 220 and 295; Col. 10:31-55 and equivalents.”

VII. CONCLUSION

IT IS HEREBY ORDERED that the proposed construction of the eighteen (18) terms submitted by the parties are construed as contained within this Order. The Court construes the primary eight (8) disputed claim terms in U.S. Patent No. 5,825,352 as follows:

“signal”	electronic digital values
“maxima”	highest value; peak value
“minima”	lowest value
“to . . . identify a maxima in a signal representing a first finger”	to . . . identify a first highest or peak value in an electronic digital value corresponding to a first finger
“to . . . identify a minima following said maxima”	to . . . identify a lowest value that occurs after the first highest or peak value and before another highest or peak

	value is identified
“to . . . identify a second maxima in a signal corresponding to a second finger following said minima”	to . . . identify a second highest or peak value in the electronic digital signal corresponding to a second finger after identifying the lowest value in the electronic digital signal
“in response to”	Plain and ordinary meaning
“operative coupling	finger induced electrical effect

IT IS FURTHER ORDERED that Claim 19 is invalid as indefinite. In addition, the Court construes the four (4) disputed means-plus-function limitations in U.S. Patent No. 5,825,352 as follows:

“means for selecting an appropriate control function based on a combination of a number of fingers detected, and any movement of said fingers” (Claim 19)	Invalid as indefinite
“means for detecting a distance between said first and second maxima” (Claim 24)	<u>Function</u> : detecting a distance between said first and second maxima <u>Structure</u> : microcontroller 60 and/or software, firmware, or hardware logic to calculate the difference between the coordinates of the first and second maxima
“means for providing a click function in response to the removal and reappearance of said second maxima within a predetermined period of time” (Claim 26)	<u>Function</u> : providing a click function in response to the removal and reappearance of said second maxima within a predetermined period of time <u>Structure</u> : microcontroller 60, and hardware logic or host software performing the algorithms disclosed, e.g., Figs. 7A-7F, 8, and 9; Col. 13:1-15:31, and their equivalents
“means for calculating first and second centroids corresponding to said first and second fingers” (Claim 30)	<u>Function</u> : calculating first and second centroids corresponding to said first and second fingers <u>Structure</u> : analog multiplexor 45; Capacitance measuring circuit 70; A to D convertor 80, Microcontroller 60, and/or software, firmware, or hardware executing the disclosed algorithm, e.g., Fig. 6-1, items 220 and 295, 9-1, items 220 and 295; Col. 10:31-55 and equivalents

DATED this 30th day of May, 2013.


Gloria M. Navarro
United States District Judge